

REMARKS

The Office Action of August 9, 2004 presents the examination of claims 1 and 3-21. The present paper cancels claims 1 and 3-21, and adds claims 22-40.

The new claims are presented in "Jepson" format to emphasize the improvement represented by the invention. No new matter is introduced by any of the new claims.

Rejection under 35 U.S.C. § 112, second paragraph

Claims 1 and 3-21 were rejected under 35 U.S.C. § 112, second paragraph, being deemed indefinite in the recitation of a "radially innermost strip" and a "radially outermost strip". The Examiner indicates that there is potential for confusion as the strips are described prior to their being wound on a drum.

Claims 1 and 3-21 are canceled, rendering this rejection moot. New claims 22-36 are free of this rejection, as they recite that the orientations "innermost" and "outermost" are in respect to the layers when they have been wound on a drum.

The change of "joint" to "join[t]ing" has been addressed in new claim 22.

Claim 17 has been canceled; the new claims do not present any issue of repetition.

Rejection over Kumagai and others

Claims 1, 3, 6, 7, 9, 11, 13-15 and 19-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kumagai '959 in view of Minami '343 and/or Smithkey '039 and further in view of Sergel '664. These claims are canceled, rendering this rejection moot. Applicant submits that this rejection should not be applied to the new claims.

The Examiner asserts that Kumagai clearly illustrates the features of butt joining of the layered structure and the angular displacement of the joints as the layers progress outward from the drum to the outermost layer. The Examiner admits that Kumagai does not describe numerical ranges for the angles recited in the claims (now 29, 30 and 36). Minami and Smithkey are cited for teaching of the thickness of the layers (from the last Office Action, and Sergel is cited for additional support to the Examiner's proposition that butt jointing of the layered structure is obvious.

As to the present claims 22 and 25, Applicant submits that the present invention provides unexpected results as shown in Tables 1-3. The skilled artisan reading the cited references would not appreciate that the method of claims 22 and 25 provides a tire having improved radial force variation and resistance to open tread joints, fewer dents and bulges in the sidewall, and fewer overall defects.

As to claim 23, this claim recites the application of the method to at least the formation of the tread rubber. Description of thickness used in Minami and Smithkey both refer to construction of the carcass portion of the tire, and thus do not refer to the tread. Accordingly, the combination of Kumagai, Minami and Smithkey does not establish *prima facie* obviousness of the invention of claim 23. Sergel, cited for further support that the technique of butt joining of the layered structure is obvious, does nothing to remedy the deficiency of the combination of the first three references. Therefore claim 23, and claim 32 dependent thereon, should be found free of this rejection.

Claim 24 recites that at least the sidewall portion of the tire is made by the method and this claim also contains a recitation about the thickness of the strips used to make the layered portion. Applicant submits that the instant invention provides an unexpected advantage to the tire made by the claimed method, in that the number of sidewall bulges or dents is improved considerably compared to a tire made in the conventional manner. See, Table 2. Therefore it is unobvious to apply the instant invention to the construction of the sidewall portion of a tire.

Claims 26 and 27 recite that the method of claim 22 is applied to the construction of the bead apex portion of the tire, with the further limitation that the widths of the various strips in the layered structure are allotted in such fashion that they decrease

as the layers are stacked up on the drum. This combination of features is not described or suggested by the combination of Kumagai, Minami and/or Smithkey and Sergel. Applicant particularly notes that Kumagai appears to show the stacking of at least two layers of equal width that are offset one from another along their width (see, Figures 1, 3 and 4) and also shows a least wide strip as falling closest to the drum (Figure 3). Accordingly the instant rejection should not apply to claims 26 and 27.

Claim 28, in the fashion of claim 27, recites that the width of the strips of the layered structure decreases as the layers are stacked outward upon the drum. Again, this feature is not disclosed or suggested in any of the cited references. Furthermore, as explained above, the primary reference actually shows the width of the strips should increase as they are laid on the drum (Figure 3) and therefore the combined references actually teach away from claim 28.

Claim 29 recites that the width of the strips of the layered structure is constant as the layers are stacked outward upon the drum. Again, this feature is not disclosed or suggested in any of the cited references. Furthermore, as explained above, the primary reference actually shows the width of the strips should increase as they are laid on the drum (Figure 3) and therefore the combined references actually teach away from claim 29.

Claims 30 and 31 recite that the minimum angle of the offset of the joints is 15 degrees, and the maximum angle is 180 degrees. The Examiner has admitted that there are no explicit teachings of these values for these parameters, but rather tries to imply from the drawings of the various references that these values are described. Applicant submits that the minimum value of 15 degrees recited in these claims provides unexpected decreases in sidewall defects, as show by the data in Table 2. The Examiner should note that changing the minimum angle from 10 to 15 degrees provides a significant improvement in this parameter. Such is not a result one of ordinary skill in the art who reads Kumagai, Minami and/or Smithkey and Sergel would expect. Accordingly, at least these claims are patentable over these references.

Claims 32-40 are dependent from claims 22-24 and 26-31, respectively, and are patentable over the cited references for the same reasons as explained above.

#### Rejection over Riggs and others

Claims 1, 3, 4, 6, 7-9, 11-15 and 19-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Riggs '104 taken with Costemalle '438. The rejected claims are canceled, rendering this rejection moot. Applicant submits that this rejection should not apply to the present claims.

The rejection is similar to that over Kumagai and others set forth. Riggs is cited for the proposition that the layered structure may be formed with the ends of each layer offset and then joined by butt joining. Costemalle is cited for the proposition that a sidewall of a tire can be formed from two layers, each having a different composition.

Applicant submits that the present claims are patentable over the combination of Riggs and Costemalle for at least the same reasons as explained above in comparing the invention to the combination of Kumagai, Minami and/or Smithkey and Sergel.

Rejections over Deist or Ragan and others

Claims 7 and 19-21 are rejected under 35 U.S.C. § 103(a) over Deist '573 and also over Ragan '714 in view of Deist and optionally in view of Montagne '019. These claims have been canceled, rendering this rejection moot.

The present claim set is directed to methods for making tires. The Examiner has indicated that the rejections of method claims over these references have been withdrawn.

The present application well-describes and claims patentable subject matter. The favorable action of allowance of the pending claims and passage of the application to issue is respectfully requested.

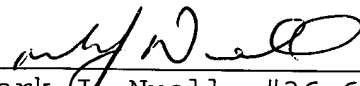
Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), Applicant respectfully petitions for a three (3) month extension of time for filing a response in connection with the present application. The required fee of \$1,020.00 is being filed concurrently with the Request for Continued Examination.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Mark J. Nuell (Reg. No. 36,623) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By   
Mark J. Nuell, #36,623

ADM/DRN/mua  
0229-0681P

P.O. Box 747  
Falls Church, VA 22040-0747  
(703) 205-8000

Attachment(s)